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Innovative Processes in the Polish Wood Industry in the Years 2005 – 2009

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Abstract: *Innovative processes in the Polish wood industry in the years 2005 – 2009.* The article presents the diagnosis of innovation activities in wood and furniture industries. The analysis of innovative processes in these branches was made from the point of view of financing of R&D activities, direction and scope of innovativeness and their influence on market outcome.

Keywords: innovativeness, wood working industry, furniture industry

INTRODUCTION

In the conditions of advancing globalization processes, competitive position of national economies to a large extent depends on the ability of industrial enterprises to introduce innovative solutions in their production processes. During their constant battle for consumers they are forced to introduce solutions improving the quality of products and services. Despite the fact that innovative activity is an expensive procedure, currently it is one of the basic activities indispensable to survive and develop further in the conditions of more and more "tight" market. A company perceived as innovative has a better capacity to reach competitive edge. It is better perceived on the market. It is also characterised by better ability to generate profit. Proper development of the innovative sphere in a company also gives a better basis to plan long-term economic development.

INNOVATIVENESS AND ECONOMIC POLICY OF THE EU

Successful development of innovativeness is at present one of the priorities of the economic policy of the EU countries, including Poland. The "Innovative economy" Operational Program approved for implementation by the European Commission in 2007 is an important document regulating innovative activities.

To increase innovative activities of the Polish economy, the government adopted the "Innovative economy" Operational Program [IEOP] that was developed within the National Strategic Reference Framework for the period of 2007-2013 [5]. The aim of this program is, first of all, direct financial support of innovative activities of economic entities, public administration and scientific and research institutions. It concerns not only supporting specific activities in already existing companies, but also creating new innovative ones.

Successful implementation of this program is a real chance for shortening the distance between modern, high-technology economic entities of west-European countries and Polish industrial companies, that in majority have outdated technical and technological machinery, small percentage of new products introduced on the market and management systems of low effectiveness.

The level of financial resources allocated for the development of innovativeness also reflects serious approach to solving the innovativeness problem. Poland allocated more than 9.71 billion euro for this purpose. Community assistance through the European Regional Development Fund (ERDF) amounts to €8.25 billion, and the remaining 1.46 billion comes from the national budget.

EXPENDITURES ON RESEARCH AND DEVELOPMENT ACTIVITY

Despite the intensification of innovative activities in the Polish economy and allocating substantial funds from the EU sources, processes in this sphere show low dynamics. The important factor slowing down the development of innovativeness is limited possibility for generating own financial sources for financing R&D activities, that are thought to be one of more effective source of financing innovation. [4]. Poland is characterised by large disparities in the structure of R&D financing compared to the leading EU countries. In the EU the majority of R&D financing (60-70%) comes from non-public sources. The majority of sources for this purpose (about 60% in 2007) comes from the state budget. R&D financing by economic entities in Poland constitutes only 25% of the total financial resources [2, 3].

Huge risk and belief that R&D activities are of low efficiency in the Polish conditions, as well as long duration of the process, lead to relatively low level of investment of industrial enterprises in R&D. It refers also to wood and furniture enterprises.

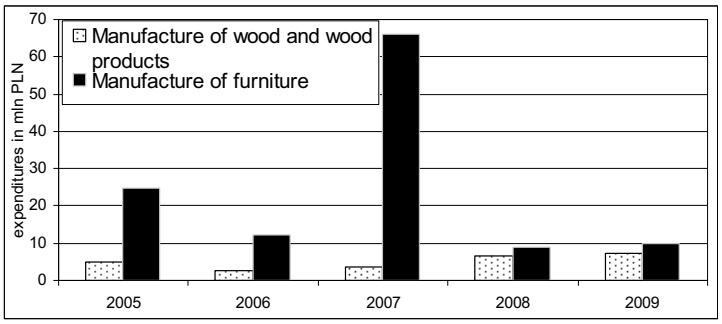

Fig.1. Intramural expenditures on R&D activity in wood and furniture industry in the years 2005-2009
Source: author's evaluation on the basis of CSO's data

Expenditure on R&D is a significant but still small element of innovative activity of Polish wood enterprises (fig 1.). The sum spent on R&D in wood industry changed from 4.9 million PLN in 2005 to 7.2 million in 2009. The lowest level of investment on R&D in this sector was observed in 2006, when only 2.7 million was spent.

Financing of R&D activity in the furniture sector is a little higher and generally, since 2007, it has been rising. In 2007 expenditure on this purpose showed the maximum level – 66 million PLN. In the next years significant reduction of expenditure on R&D was observed, in 2008-2009 this expenditure ranged from 8 to 10 million PLN.

Despite quite diversified trends in the R&D spending, general funds allocated for innovative activities in products and processes in wood industry in the consecutive years were similar and amounted to 380-420 million PLN (Fig. 2). In the furniture industry, despite the crisis in the recent years, expenditure on R&D increased considerably from 494 million in 2005 to 869 in 2008.

Fig.2. Expenditures on innovation activity for product and process innovations in wood and furniture industry in the years 2005-2008
Source: author's evaluation on the basis of CSO's data

THE CHARACTER OF INNOVATIVE PROCESSES

The directions and level of expenditure of financial resources on innovative activity of wood and furniture industry reflect the technological character of innovation.

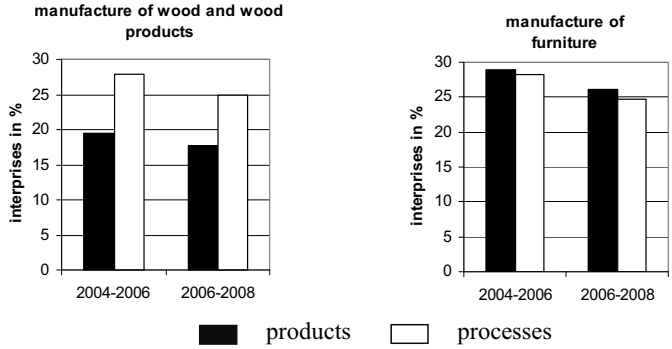

Fig 3. Share of enterprises which introduced new or significant products and processes in wood and furniture industry.
Source: author's evaluation on the basis of CSO's data [1,2]

A characteristic feature for wood industry is the dominance of process innovation over product innovation (fig. 3). The percentage of companies of wood industry that introduced process innovations in the years 2006-2008 amounted to 25%, in the case of product innovation it was 18%. Wood companies introduced more innovations concerning the production process than new products. The character of introduced innovations in furniture industry is similar to European trends, where product innovations dominate. In the years 2006-2008 the percentage of companies that introduced process and product innovations was comparable and amounted to 25%.

In the structure of expenditure on innovation of Polish wood and furniture enterprises dominate expenditure on investment. This fact reflects constant need to modernise technical and technological machinery of production companies as well as modernisation and development of production sites and distribution and sale points.

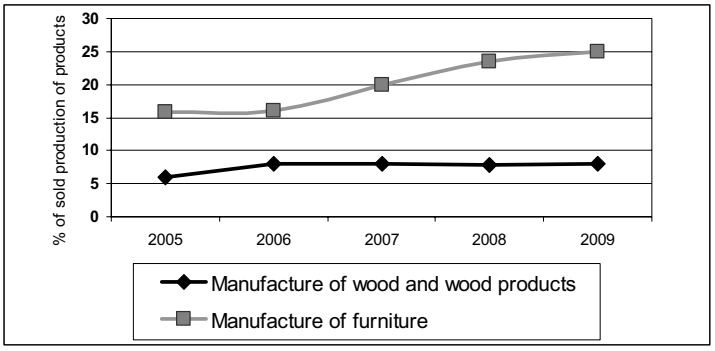

Fig. 4. Share of sold production of new and modernised products in wood and furniture production
Source: author's evaluation on the basis of CSO's data [1]

The results of innovative activity are reflected by the share of sold production of new and modernised products in the total production sold (fig.4). The domination of process innovation in wood industry is shown by low level of new and modernised products sold (about 8%). The results of furniture industry in this respect are much better. Due to sustainable investment in product and process innovations the share of sale of innovative products in furniture industry is much larger. After systematic increase in the recent years, in 2009 the share if new and considerably improved products rose to 25%

CONCLUSIONS

The position of industrial enterprises in the present economic environment to a large extent depends on the proper development of innovative activity. The development of innovativeness is not possible without proper financing of R&D and tight cooperation of its units with industrial entities.

The level of R&D financing in the Polish wood industry is far from the desired one. The result is a limited scope of innovative activities and low share of innovative enterprises in these branches compared with the Western Europe.

Contrary to European tendencies, where product innovations dominate, in the Polish wood industry these are process innovations that dominate. The furniture industry shows a little better results in this respect. Sustainable development of process and product innovations in this branch is reflected in the increase of sale of innovative products.

The main obstacles in the innovative activity according to the opinion of the entrepreneurs are limited possibilities of financing, especially from the own resources of the enterprises, high costs of innovation, considerable risk connected with implementation of innovation, lack of interest of buyers in new products.

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Streszczenie: *Procesy innowacyjne w polskim przemyśle drzewnym w latach 2005-2009*. W pracy przedstawiono ocenę działalności innowacyjnej przedsiębiorstw przemysłu drzewnego i meblarskiego. Analizę procesów innowacyjnych w tych branżach dokonano pod katem wielkości finansowania sfery B+R, kierunków i zakresu działań innowacyjnych oraz ich wpływu na efekty rynkowe.

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